CQ HAND + UPPER LIMB
SPECIALIST ORTHOPAEDIC SURGEON

PATIENT INFORMATION

Trochlear dysplasia and trochleoplasty

Why this operation has been suggested

Dr Kieran Hirpara, an orthopaedic surgeon at Mater Private Hospital Rockhampton, offers trochleoplasty when the groove behind the kneecap is too flat and keeps letting the kneecap slip. The groove is called the trochlea. When it has not formed properly, this is called trochlear dysplasia. The operation reshapes the groove so it holds the kneecap more securely.

Patients are generally referred to our clinic by their GP; if a physiotherapist has suggested you see us, you will still need a referral from your GP in order to be eligible for the Medicare rebate. We assess you with a history, an examination, and imaging where needed. Non-operative care usually comes first, such as physiotherapy or activity change. Surgery is considered when that has not given enough improvement, or when the kneecap keeps dislocating despite other treatment.

This operation is typically offered to people with severe flattening of the groove who have ongoing kneecap instability. It can also be an option for some adolescents whose growth plates are still open, and it can be done without disturbing further growth. The aim is a stable kneecap, less pain, and better function in daily life and sport.

Before the operation

Once surgery is booked, our team will give you clear instructions so you know exactly what to do. You will need to stop eating and drinking seven hours before your operation. We ask for seven hours rather than six so your surgery time can be brought forward if the theatre list runs early. Your surgeon will tell you which of your regular medications to stop and when, so bring a written list of everything you take, including any blood thinners. Arrange for someone to drive you home afterwards, as you will not be able to drive yourself. Wear loose, comfortable clothing on the day. If you have other medical conditions, you may need blood tests or a review with the anaesthetist, but most people do not.

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On the day

You will arrive at the hospital's surgical admissions unit, where you are checked in and prepared for theatre. You will then meet the anaesthetist. This operation is done under general anaesthetic. A regional nerve block is sometimes added for post-operative pain relief; the anaesthetist will discuss this with you on the day. You are then taken into the operating theatre, where the operation is performed.

You will wake up in the recovery area, where nurses monitor you while the anaesthetic wears off. Once you are stable, you will either move to a ward or go home, depending on the procedure and how your recovery is going.

What the operation involves

Trochleoplasty reshapes the groove behind your kneecap so it holds the kneecap more securely. Your surgeon works through a cut at the front of the knee. The groove is deepened and reshaped so it matches a more normal shape. The kneecap then sits and moves in this new groove instead of sliding out.

Some people need more than one procedure at the same time. The groove reshaping is often combined with a ligament repair or reconstruction that steadies the kneecap from the inside of the knee. If the thigh bone itself is twisted, the bone can be cut and turned to a better position, which also helps hold the kneecap on track. Your surgeon will explain which parts apply to you, because each operation is tailored to the shape of your knee.

The cut is closed with stitches and covered with a dressing. You will wake up in the recovery area with your knee dressed and supported, and our team will show you how to care for it before you go home.

After the operation

You will wake up in the recovery area, then move to the ward once you are stable. Nurses will keep an eye on you and give you pain relief so you stay comfortable. Your knee will be dressed and supported, and our team will show you how to care for the wound before you go home. We leave the dressing on for about 10 days; please do not take it off before then unless we tell you to. We change or remove it when we see you. You will be encouraged to get up and walk with help, often within the first day. Someone should stay with you for the first 24 hours after you leave hospital. Your team will tell you whether you go home the same day or stay one night in hospital.

Recovery

Your knee will be sore and swollen for the first while. Pain relief keeps you comfortable, and keeping the knee raised when you rest helps the swelling settle. Ice packs can also ease the discomfort. The swelling usually improves gradually over the first couple of weeks.

You will be up and walking with help early on, often within the first day. Your physiotherapist will guide you through exercises to restore movement and build strength in the thigh muscles. These exercises matter as much

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as the operation itself, so do them as directed. You can move around the house, but take it steady and follow your team's advice about how much weight to put through the leg.

Once the swelling settles and movement returns, everyday tasks get easier. Stairs, standing for longer, and bending the knee all feel more natural as the weeks pass. You will be able to drive once your surgeon clears you, and you can return to work and sport as your strength and confidence come back. People with more severe flattening of the groove sometimes need a bit longer before returning to sport.

Recovery varies from person to person. Your timeline may differ, and your surgeon and physiotherapist will guide you at each stage.

What can go wrong

Most patients do well, but problems can occasionally happen. Your surgeon and the team monitor you closely to spot any issue early.

The kneecap can still slip or feel unstable after the operation. You might notice the kneecap giving way, or a feeling that it is shifting out of place again. If this happens, tell your surgeon at your next review, or call the clinic sooner if the knee keeps giving way.

The joint surface behind the kneecap can wear over time. This is called wear-and-tear arthritis, and it can affect the front of the knee after this operation. You might feel a deep, aching pain at the front of the knee, or notice a clicking or grinding feeling when you bend it. The pain may be worse with stairs, squatting, or sitting for long periods. If you notice these changes, bring them up at your next review so your surgeon can assess the joint.

The reshaping of the groove can also affect the cartilage covering the bone. Cartilage is the smooth, slippery layer that lets the kneecap glide. If it is affected, you may feel catching, grinding, or swelling in the knee. Mention any of these symptoms to your surgeon so they can be checked.

Some people who have other procedures at the same time, such as moving the tendon attachment below the kneecap, can have more problems afterwards. Your surgeon will talk through which parts of the operation apply to you and what to watch for.

For teenagers whose growth plates are still open, this operation does not disturb further growth. This has been checked in young patients having the operation for a kneecap that keeps dislocating.

If you notice anything unexpected, such as new pain, swelling, or a knee that feels unstable, contact the clinic. The complications table on this page lists typical rates if you want the specifics.

When to call us

Call us if you have a fever, or if the skin around the wound becomes more red, swollen, or starts leaking fluid. Call us if your pain suddenly gets worse, or if your calf becomes swollen and tender. Go to emergency if you become short of breath, or if you lose feeling in your leg or cannot move it. These symptoms need checking straight away. If anything else worries you, call the clinic. We would rather hear about it early.

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